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AUTHOR Hill, Shirley; And Others
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ABSTRACT

This study attempted to investigate several questions, among which are: Can specific attitudes and behaviors of prospective teachers be identified in an oral, 15-minute interview? Does a particular training program change prospective teachers' reported attitudes and basic knowledge of psychological principles and teaching techniques in predictable directions? The experimental group (Group 1) consisted of 23 students selected primarily on the basis of personal interviews with program instructors. Group 2 had 26 students selected according to traditional admission criteria. Group 1 students were selected because they exhibited the following behavioral characteristics to a high degree: flexibility, self-awareness, reality-orientation, responsiveness to others, assertiveness, "cool," warmth, and enthusiasm. Group 2 served as a control to this selection procedure. Students were pre- and posttested on two scales--Kerlinger's Education Scale VII and the Basic Concepts Test. Although the procedures utilized in selecting students for the experimental group did not result in test scores that were significantly different from those of the control group, the mean scores all favored the experimental group. (JA)

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BEHAVIORAL CHARACTERISTICS OF PROSPECTIVE ELEMENTARY TEACHERS: DO THEY CHANGE THROUGH TRAINING?

by

Shirley Hill, Anne Langstaff, and Les March

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BIOGRAPHICAL INFORMATION ON WRITERS

Shirley Hill
(Ed.D. - University of Arizona)
currently Assistant Professor of Teacher Education
at California State University, Fullerton

Anne Langstaff
(Ph.D. - University of Southern California)
currently Media Coordinator at the Instructional
Materials Center for Special Education at
University of Southern California--at time
this program was designed and implemented an
Assistant Professor at California State University,
Fullerton

Les March
(Ed.D. - University of Southern California)
currently Associate Professor of Special Education
at California State University, Fullerton

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Behavioral Characteristics of Prospective Elementary Teachers: Do They Change through Training?

Introduction

Although a great deal of effort has been expended on the study of teachers and teaching, relatively little useful information has been generated concerning teacher effectiveness and ways to promote it. Recently several researchers have suggested that specific components of teacher effectiveness should be investigated in relation to explicit paradigms for teacher training. (1)

Gage suggests that although it is difficult to make positive reasearch-based statements about successful teaching personalities, there appear to be four dimensions of importance: warmth, indirectness, cognitive organization, and enthusiasm. (2) Mitzel warns of the difficulty in jumping directly from predictor variables (personality characteristics) to criterion variables (teacher effectiveness). (3) He suggests that there are contingency factors and classroom behaviors which act as intervening variables. Although personality characteristics are only one part of teaching effectiveness, they are crucial and worthy of further study.

In developing teacher education programs, it is essential to determine if personality factors such as attitudes and abilities may be identified in advance and developed through training.

The study of teacher attitudes is one dimension of teacher effectiveness which has been extensively researched. Many studies indicate that teacher attitudes significantly affect teacher behaviors, student behaviors, and may be changed through appropriate training. (4)

Knowledge of basic concepts of the theory and application of psychological principles and teaching techniques also influence teacher effectiveness. Several writers have urged that significant changes in both the structure and content of teacher education are necessary. (5) Merrill has argued for the development of programs "designed to develop in the teacher specific skills that will be of direct usefulness and relevance in teaching." (6) It has been demonstrated that when teachers are exposed to an instructional sequence which is designed to develop specific relevant skills, as well as knowledge of concepts, they show significant gains in the classroom implementation of effective teaching techniques. (7)

Problem

This study attempted to investigate several questions: Can specified attitudes and behaviors of prospective teachers be identified in an oral, fifteen-minute personal interview?

Will students who have successfully completed a course in psychological foundations demonstrate different attitudes and abilities, as expressed in a test situation, than students who have not studied educational psychology? Does a particular training program change prospective teachers' reported attitudes and basic knowledge of psychological principles and teaching techniques in predictable directions?

The objectives of the study were:

1.0 To compare the pre-test performance of three student groups on a measure of traditional and progressive attitudes and a test of basic concepts.

1.1 To demonstrate that the experimental group was more progressive and less traditional than the two control groups.

1.2 To demonstrate that the program control group performed at a significantly higher level on the Basic Concepts Test than did either the experimental or selection control group.

2.0 To contrast the pre- and post-scores of both the experimental and program control groups on the attitude and the basic concepts measure.

2.1 To demonstrate that both groups became more progressive and less traditional during the semester.

2.2 To demonstrate that both groups had significantly higher post-test scores on the measure of basic concepts.

3.0 To compare the post-test performance of the experimental group with that of the program control group on a measure of traditional and progressive attitudes and a test of basic concepts.

3.1 To demonstrate that the experimental group was more progressive and less traditional than the program control group.

3.2 To demonstrate that the experimental group had significantly higher scores on the measure of basic concepts than the program control group.

The data reported here is a part of a larger program on teacher education which was performance based, field centered, and team taught. (8)

Design and Method

1. Subjects

Three groups of students enrolled in Elementary Teacher Education programs at California State University, Fullerton participated in the study. The experimental group (Group I) consisted of 23 students selected primarily on the basis of personal interviews with program instructors. Group II had 26 students, selected according to traditional admission criteria (GPA and letters of

recommendation). Both of these groups were involved in pilot teacher education programs which were based on an instructional team approach and which were designed to meet the requirements of the Ryan Act (1970). The third group (Group III) consisted of 23 students who were completing their pre student-teaching experience under the state and university guidelines in existence prior to the Ryan Act. These students had already completed a course in educational psychology, including fieldwork, at the time of this study. Group II served as a control for the selection interview technique described below, while Group III provided a control for the particular experimental program in Teacher Education presented to Group I. (9) The age and sex distribution for each of the three groups are shown in Table 1 below.

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Insert Table 1 here
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2. Selection of Students in Group I (Experimental)

Forty-seven prospective teachers were interviewed for an experimental program in elementary education. The three member instructional team together, conducted semi-structured personal interviews with each applicant. Applicants accepted for the program were students who met general Teacher Education requirements. In the judgment of the instructional team these applicants also exhibited

the following behavioral characteristics to a high degree: flexibility, self-awareness, reality orientation, responsiveness to others, assertiveness, "cool," warmth, and enthusiasm. (See Note #13 for reference relating to operational definitions of these characteristics.) These characteristics were rated on a five point scale by each interviewer. Applicants were then assigned a composite rating. Inter-rater reliability coefficients between pairs of observers ranged from .60 to .92 indicating a high level of agreement among the team members. The thirty students receiving the highest composite ratings were approved for the program. Twenty-four of these students actually participated in the program; this study reports data obtained for 23 students, since test results were incomplete for one subject.

3. Description of Instruments

The students in all three groups were pretested on two scales—Kerlinger's Education Scale VII (10) and the Basic Concepts Test (11). The Kerlinger instrument is a thirty item Likert-type scale, designed to measure progressive and traditional attitudes towards teaching. The items for A (progressivism) and B (traditionalism) are scored separately. Reliability estimates reported by Kerlinger (1969) range from .77 - .87 for progressivism and from .69 - .85 on traditional attitudes. The Basic Concepts Test consists

of 25 items (multiple choice; matching; open-ended) which tap factual information about learning principles and trends in educational psychology. The maximum number of points possible on the test is 95; test-retest reliability estimate is .82. (12)

4. Collection of Data

Each of the three student groups were given the Kerlinger Education Scale VII and the Basic Concepts Test during two testing sessions in the first week of the fall semester, 1972. During the final week of instruction for the semester, the posttesting was completed, using the same instruments. Only Groups I and III received the posttests.

5. Data Analysis

Pre and posttest means and standard deviations were calculated for each student group on all measures. Since random assignment of students to treatments groups was not possible, the design was one in which t tests were used to test the significance of differences between means. In comparing the pre and posttest performance within groups, the t test for correlated samples was used. The t test for separate group variance was used when comparisons were made between groups. The accepted level of significance was .05.

Results

The pretest comparisons between the performance of the three student groups on the Kerlinger scale and the Basic Concept Test are shown in Tables 2 and 3. No significant differences were found between the experimental group and the control group on measures of traditional and progressive attitudes or knowledge of concepts prior to instruction.

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Insert Tables 2 & 3 about here
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Tables 4 and 5 present the pre and posttest comparisons for the two groups. During the semester, the experimental group made significant gains in the area of progressive attitudes, while the gains made by students in the program control group were not significant. Both groups performed signigicantly higher on the Basic Concepts Test following a semester of

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instruction. The posttest comparisons are shown in Tables 6 and 7. No significant differences between the experimental and program control group were found on measures of traditional and progressive attitudes. The experimental group, however, performed at a significantly higher level on the posttest for Basic Concepts than did the control group.

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Insert Tables 6 & 7 about here
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Discussion

Although the procedures utilized in selecting students for the experimental group did not result in test scores that were significantly different than the two control groups, the mean scores all favored the experimental group. Perhaps the importance of the interview was the commitment to the program which emerged on the part of both the instructors and students. There was an extremely high level of compatability between instructors and students as well as between students. The instructors felt they had selected innovative and flexible students; the students felt they were a part of a special program. Certainly this led to a climate conducive to cooperation and learning. The Pygmalion principle may have been in operation.

The increse in performance level between pre and post tests on the concept and progressive evaluations was significant for the experimental group in spite of its higher entry levels. This result may have been due to the training program or also due to the Pygmalion principle.

It was interesting to note that the group with the educational psychology background did not enter with greater knowledge of basic concepts. However, their scores did improve significantly during their courses in teaching methods. Their progressive and traditional attitudes did not change substantially during the semester.

The results of this study point to the need for a continued investigation of entry characteristics of prospective teachers and subsequent training programs. They also demonstrate that prospective teachers may effectively learn specific skills relevant to teaching.

Table 1

AGE AND SEX DISTRIBUTIONS BY PERCENTAGE FOR THREE STUDENT GROUPS

	AGE						
GROUP	18–22	23–30	31–40	Over 40	Men	Women	N
I	39	44	13	4	26	74	23
II	43	17	23	17	23	77	26
III	43	43	5	9	18	82	23

Table 2

PRETEST COMPARISONS: KERLINGER'S EDUCATION SCALE VII

Groups	Pretest Mean Traditional	t	n	Pretest Mean Progressive	t	n
I (experimental)	5.60		23	8.67		23
II (selection control)	6.05	1.43	26	8.35	1.23	26
I	5.60		23	8.67		23
III (program control)	5.89	.90	23	8.62	.19	23
II	6.05		26	8.35		26
III	5.89	.50	23	8.62	1.25	23

Note—no differences were significant.

Table 3

PRETEST COMPARISONS: BASIC CONCEPTS TEST

Groups	Pretest Mean	t	n
I (experimental)	52.5		23
II (selection control)	50.0	.89	26
I	52.5		23
III (program control)	48.4	1.44	23
II	50.0		26
III	48.4	.68	23

Note—no differences were significant

Table 4

PRE AND POSTTEST COMPARISONS: KERLINGER'S EDUCATION SCALE VII

Groups	Pretest Mean Traditional	Posttest Mean Traditional	t	n	Pretest Mean Progressive	Posttest Mean Progressive	t
I (experimental)	5.60	5.27	-1.75	23	8.67	9.19	2.66*
III (program control)	5.89	5.83	- .28	23	8.62	8.82	1.21

* $p < .05$

Table 5

PRE AND POSTTEST COMPARISONS: BASIC CONCEPTS TEST

Groups	Pretest Mean	Posttest Mean	t	n
I (experimental)	52.50	69.52	4.01**	23
III (program control)	48.39	56.78	3.42**	23

** $p < .01$

Table 6

POSTTEST COMPARISON: KERLINGER'S EDUCATION SCALE VII

Groups	Posttest Mean Traditional	t	n	Posttest Mean Progressive	t	n
I (experimental)	5.27		23	9.19		23
III (program control)	5.83	1.96	23	8.82	1.57	23

Note--no differences were significant

Table 7

POSTTEST COMPARISON: BASIC CONCEPTS TEST

Groups	Posttest Mean	t	n
I (experimental)	69.52		23
III (program control)	56.78	4.83**	23

** $p < .01$

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